

## TRAPPING ESTIMATES FOR SAKER AND PEREGRINE FALCONS USED FOR FALCONRY IN THE UNITED ARAB EMIRATES

NIGEL W.H. BARTON<sup>1</sup>

*Dubai Falcon Hospital, P.O. Box 23919, Dubai, United Arab Emirates*

**KEY WORDS:** *trapping; Saker Falcon; Peregrine Falcon; Falco cherrug; Falco peregrinus; Middle East; falconry.*

Falconry in the Middle East depends on large numbers of wild-caught Saker (*Falco cherrug*) and Peregrine (*F. peregrinus*) Falcons (Allen 1980, Platt 1988, Remple 1988, Riddle and Remple 1994, Cade 1997). The larger female falcons are used primarily to hunt Houbara Bustard (*Chlamydotis undulata*), but some Saker Falcons are used for hunting Arabian hares (*Lepus capensis*). Smaller male Peregrine Falcons are more suited to catch Stone Curlews (*Burhinus oedicephalus*). Falcons are trapped from as far as Eastern China to the Red Sea coast. Although information might be gathered from trappers or from markets, figures for the number of falcons being sold to the Middle East are difficult to collect and their reliability is questionable. Other species used in smaller numbers include Lanner Falcons (*F. biarmicus*), Laggar Falcons (*F. jugger*), Barbary Falcons (*F. p. peregrinoides*), Red-headed Falcons (*F. p. babylonicus*), Black Shaheens (*F. p. peregrinator*), Gyrfalcons (*F. rusticolus*) and captive-bred Gyrfalcon hybrids.

Since the early 1980s, professional veterinary care has been provided for these falcons with well-established clinics in Dubai, Abu Dhabi, Qatar, Bahrain and more recently in Saudi Arabia. At the Dubai Falcon Hospital (DFH), comprehensive computer records have been maintained since 1983. As many as 60 falcons are treated each day during the peak season. The majority of falcons admitted are from the United Arab Emirates with small numbers from other parts of the Middle East. An increase has been seen in the number of visits falconers make to the veterinary clinic. This is largely due to increased awareness amongst falconers and encouragement from the service being sponsored by H.H. Sheikh Hamdan bin Rashid Al Maktoum as a free service to the people. Many of the falcons are brought immediately upon purchase for routine checks and vaccinations and are therefore healthy on their first visit. The hospital is the most accurate source for information on falcon numbers and species within the region. In recent years, the majority of falcons seen at the Abu Dhabi Falcon Hospital have been hybrids. Hybrids are much less common in Saudi Arabia and the recent establishment of a falcon hospital in Riyadh should provide data, particularly on

the numbers of wild-caught Saker Falcons being sold to that region. This paper examines data collected on falcon numbers in the DFH from 1983–98. It is intended to estimate the minimum numbers of wild-caught falcons being used for falconry in the United Arab Emirates, mortality during the year, the proportion of captive-bred falcons being used and the species used.

### METHODS

Each falcon brought to the hospital was routinely allocated a sequential case number and accompanying veterinary record which included information on the species, sex, age, mass, relevant health problems and the owner's background. On its first visit, each falcon was implanted with a permanent microchip making it identifiable for subsequent visits. Any veterinary problems were treated and results of treatments, surgeries, microbiology, hematology and pathology were added to the computerized veterinary record.

A distinction was made between new falcons, total falcons and total visits. New falcons were those which had no microchip and were, therefore, assumed never to have been in the hospital before, or was implanted elsewhere but had never been to the hospital before. Total falcons were new falcons and falcons seen during the year which had been recorded at the DFH in previous years. Total visits were the sum of the number of visits made by each falcon during the year. No account is taken of length of stay in the hospital. The annual figures were calculated for the year beginning June 1, the peak falcon season being October–February.

Saker and Peregrine Falcons are the most popular species and they accounted for most of the falcons seen. For this reason, the data were analyzed separately and the data were for new falcons only each year. Very few captive-bred Saker or Peregrine Falcons are sold to the Middle East. Therefore, the figures were a good estimate for the number of falcons trapped.

### RESULTS

From 1983–84, the total number of falcons of all species brought to the hospital for treatment or routine checks was 73 (Fig. 1). This number increased to 2594 in 1997–98. During the 5-yr period from 1993–98, the numbers remained relatively constant despite the fact that very few falcons were not brought to the hospital.

Since 1993, a record was kept of the number of visits made by each falcon and hence a total number of visits for all falcons each year. The number of new falcons and the total number of falcons remained relatively constant (Fig. 2) averaging 1900 and 2400, respectively, each year.

<sup>1</sup> Present address: Penllyn Farm, College Road, Carmarthen, Carmarthenshire, SA33 5EH, U.K.

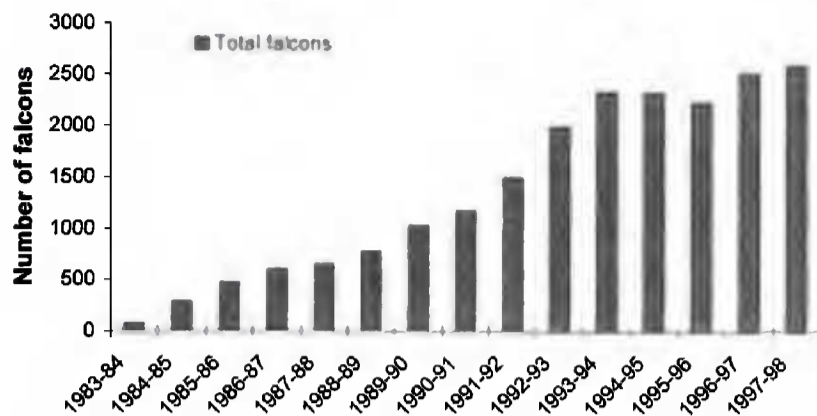


Figure 1. Total falcons admitted to the Dubai Falcon Hospital each year since 1983.

However, falcons were brought more frequently than in previous years with the total number of visits exceeding 5000 in 1995-96. No figure was available for 1997-98. Since 1993, approximately 25% of the falcons brought to the hospital in any one year had been to the hospital the previous year or before, an indication that most falcons were held during the summer months and used again the following hunting season. Of the other 75%, some were lost, released at the end of the season, died or were not brought to the hospital in subsequent years.

Both Saker and Peregrine Falcons were categorized by age and sex in 1993-98 (Table 1). The numbers were calculated as a percentage of new falcons (all species included) to indicate the changes within each species, sex, and age category. The total number of Saker and Peregrine Falcons remained fairly constant at about 1500 individuals, down from a maximum of 1953 falcons during the 1993-94 season. The total number of Peregrine Falcons increased by 12.5% over the 5-yr period, whereas Saker Falcon numbers decreased by 43%. The largest decrease was in juvenile female Saker Falcons.

There was a gradual decline in the percentage of Saker Falcons and an increase in the percentage of Peregrine Falcons. During 1993-94, Saker and Peregrine Falcons accounted for 94% of all new falcons seen. In 1997-98, they accounted for 74%. One reason for this decrease in Saker and Peregrine Falcons may have been the resurgence in popularity of captive-bred Gyrfalcons and Gyrfalcon hybrids. From a total of 58 hybrids seen in 1993-94, the number increased to 274 during 1997-98. However, in absolute numbers, Saker Falcons decreased from 1292 to 732 over the 5-yr period.

#### DISCUSSION

Within the United Arab Emirates, Saker Falcon numbers are decreasing whereas the numbers of captive-bred hybrids and Peregrine Falcons seems to be increasing. Historically, Peregrine Falcons were used more than Saker Falcons in the Gulf States. In the 1970s, there was a surge of captive-bred falcons into the Middle East, but their numbers subsequently decreased because falconers preferred wild-caught falcons. This attitude was largely

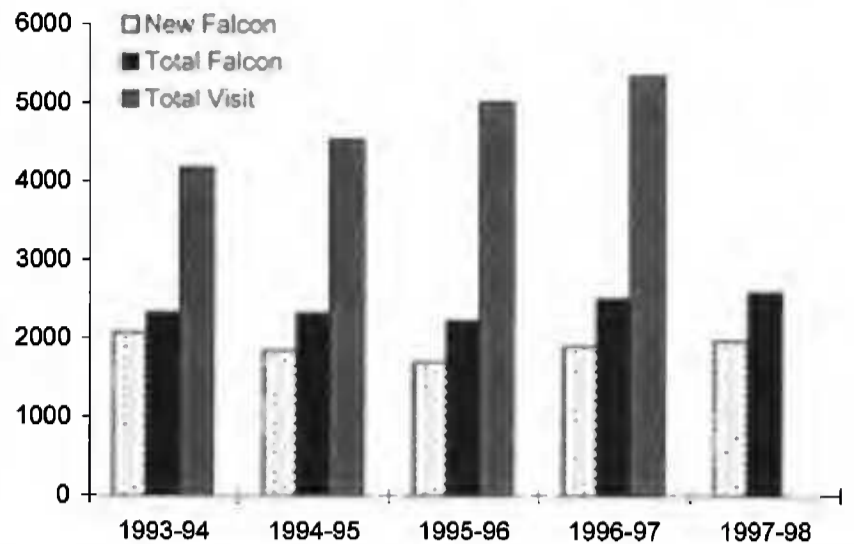


Figure 2. New falcons, total falcons and total falcon visits to the Dubai Falcon Hospital from 1993-98. No value was available for total visits in 1997-98.

due to falconers applying the same methods which they used to train wild falcons to training captive-bred falcons. Captive-bred falcons require different training methods and the Arabs did not get the best out of the falcons and were disappointed in them. There has recently been a resurgence in the number of captive-bred falcons used, partly because falconers have modified their training

Table 1. Numbers of new Saker and Peregrine Falcons admitted to the Dubai Falcon Hospital from 1993-98 calculated as a percentage of the total of new falcons admitted. All species included in parentheses.

	SAKER FALCON		PEREGRINE FALCON	
	MALE	FEMALE	MALE	FEMALE
<b>1993-94</b>				
Adult	26 (1.3)	225 (10.8)	19 (0.9)	81 (3.9)
Juvenile	112 (5.4)	929 (44.7)	189 (9.1)	372 (17.9)
Total	1292 (62.2)		661 (31.8)	
<b>1994-95</b>				
Adult	27 (1.4)	242 (13.1)	23 (1.3)	107 (5.8)
Juvenile	73 (4.0)	623 (33.8)	171 (9.2)	358 (19.4)
Total	965 (52.3)		659 (35.7)	
<b>1995-96</b>				
Adult	12 (0.7)	222 (13.1)	18 (1.1)	69 (4.1)
Juvenile	53 (3.1)	473 (27.8)	222 (13.1)	367 (21.6)
Total	760 (44.7)		676 (39.9)	
<b>1996-97</b>				
Adult	15 (0.8)	208 (10.9)	16 (0.8)	105 (5.5)
Juvenile	77 (4.0)	563 (29.5)	199 (10.4)	313 (16.4)
Total	863 (45.2)		633 (33.1)	
<b>1997-98</b>				
Adult	17 (0.8)	217 (11.0)	36 (1.8)	133 (6.7)
Juvenile	72 (3.6)	426 (21.5)	199 (10.1)	376 (19.0)
Total	732 (36.9)		744 (37.6)	

methods and because of the increasing interest in hybrids. Large, light-colored falcons have always been highly valued in Arabia. As such, pale colored Gyrfalcons and Saker Falcons were previously sought after. Survival of pure Gyrfalcons in the desert environment and Middle East climate requires special handling and fatalities are frequent. Large, pale, captive hybrids such as Gyrfalcon/Saker Falcon crosses combine the advantages of a desert-adapted falcon with a falcon of exceptional power and beauty.

Saker Falcon numbers, especially juvenile females, have fallen dramatically. During the 1997–98 season, 426 were admitted to the hospital compared to 929 in 1993. Data were collected at one hospital in Dubai, a rapidly developing country. In recent years, some sheikhs within Dubai have bought only large numbers of captive-bred hybrids. It is possible, therefore, that the market for Saker Falcons has concentrated on other regions of the Middle East. However, unless female Peregrine Falcons are preferred to female Saker Falcons, a similar decrease might be expected in Peregrine Falcon numbers. On the contrary, Peregrine Falcons have shown a recent increase.

Is the decrease in the number of Saker Falcons admitted to the hospital a real indication of fewer Sakers being trapped? If so, is this because of reduced demand or decreasing population numbers? Although juvenile numbers decreased, the number of adult Saker Falcons remained constant. Does this indicate that Sakers have experienced several consecutive poor breeding seasons? Almost every falcon is brought to the hospital at the start of the season for a routine check. Therefore, the difference in numbers between the species should not be attributed to some species being more susceptible to disease and therefore more often seen in the hospital.

The falcon species flown vary in different regions of the Middle East. For example in Taif, the plateau region in southern Hejaz, Saudi Arabia and on the Tihama plains adjacent to the Red Sea, Barbary Falcons are preferred. They are more suited to hunt Stone Curlews, Francolins (*Francolinus pondicerianus*) and Partridge (*Ammodramus heyi*) found in this region. They are also cheaper to buy and more within the price range for people from this area than large falcons which sell for higher prices in the larger cities and which are used for Houbara Bustard and hares (Cade 1997). Laggar Falcons, Lanner Falcons and other small falcons are also trapped, but they have little financial value.

From the Dubai data, there is no evidence that the number of falcons being used for falconry is increasing. The number of falcons seen each year since 1993 remained relatively constant. Approximately 1500 Saker and Peregrine Falcons were brought to the DFH each year. In addition to these, falcons were trapped for sale in other parts of the U.A.E., Saudi Arabia, Kuwait, Bah-

rain and Qatar. Riddle and Remple (1994) estimated that there might be as many as 8600 Saker and Peregrine Falcons in captivity in the Middle East. It appears that there is considerable movement of falcons within the Middle East countries with falcons arriving in the Emirates and subsequently being moved to Saudi Arabia. If this is the case, then this figure would overestimate the actual number of falcons being used. Additional data from other falcon hospitals in the Middle East, especially Abu Dhabi and Riyadh, in conjunction with ongoing population studies should enable us to determine whether Saker and Peregrine Falcon populations can support this trapping pressure and, if not, what approach should be taken to regulate it.

RESUMEN.—El halcón sacre (*Falco cherrug*) y el peregrino (*Falco peregrinus*), son los halcones mas utilizados en la cetrería en el Medio Oriente. Los registros veterinarios en el hospital de halcones de Dubai proveen una base para estimar el número de halcones atrapados anualmente. Durante el período de 1993–98, el número de halcones peregrinos atendidos en el hospital se incrementó en un 12.5%, mientras que los halcones sacre disminuyeron en un 43%. Los híbridos de halcón gerifalte (*Falco rusticolus*) aumentaron en un 13.8% del total de halcones observados en la clínica. Las hembras juveniles de halcón sacre disminuyeron en un 54%.

[Traducción de César Márquez]

#### ACKNOWLEDGMENTS

I would like to thank the Dubai Falcon Hospital, T. Cade, D. Ellis and an anonymous referee for providing helpful comments on the manuscript.

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Received 29 August 1998; accepted 6 October 1999